Mapping Transnational Extremist Networks: An Exploratory Study of the Soldiers of Odin's Facebook Network, Using Integrated Social Network Analysis

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Abstract

This article argues that social network analyses of the online communications and structures of right-wing extremist groups can allow researchers to obtain otherwise hard-to-get insights into the ideology, rhetoric, and behaviour of groups. This is illustrated through a study of Facebook-based relations between members of the Soldiers of Odin in Canada, Finland, and Sweden in early 2017. The authors argue that these communications demonstrate the presence of close coordination between the Canadian and Finnish branches of the Soldiers of Odin, suggesting ideological conformity. The authors further demonstrate the presence of a pre-existing divide between the Québec and rest of Canada chapters of the Soldiers of Odin, which contributes to explaining the April-May 2017 schism of the movement. The authors conclude by advocating increased attention to online networks for the study of extremist groups.

Keywords: Soldiers of Odin, right-wing extremism, vigilantism, Canada, Finland, Sweden

Introduction

In recent years, extreme right groups and activists have greatly benefitted from social media and other online technologies that allow for easier communication, coordination, and propaganda dissemination.[1] As interactive communications facilitate more active involvement and increased coordination between networked extremist groups, the importance of understanding extremist interactions through social media is increasing. The use of new technologies does not merely expand the capabilities of groups, but allows such groups to coalesce into larger scale social movements in which online and offline structures and interactions influence each other and shape the groups' activities, ideology, and rhetoric.[2] Indeed, the last ten years have seen an increase in the political activity and visibility of extreme right political movements on social media platforms, which have, in part, been rewarded with electoral successes in several European countries. In addition, the European and North American social and political scenes have seen the rise of groups which locate themselves in the ideological area of the far right, as well as the spread of episodes of political violence associated with the extreme right.[3]

Given this increasing interconnectedness between groups and individuals, processes of radicalization and dissemination have changed.[4] The dissemination of propaganda is becoming exceedingly easy, which can impact the beliefs and actions of individuals and groups.[5] As such, the study of online networks of communication, information circulation, and interaction acquires a crucial value for researchers, who can—through the study of online communication—potentially trace the processes of radicalization and ideology formation in extremist groups. Consequently, given that extremist groups often communicate online beyond the confines of a localized group, this investigation draws on social movement theory to analyse the process of ideology formation in extreme right groups.

The present study aims to explore the suitability of using Social Network Analysis (SNA) to track the online communication channels of right-wing extremist groups and thereby allow for a deeper understanding of the relationship between online activity and offline behaviors and structures. In other words, it is argued that the relationships and communications established online by members of extreme right groups reflect and shape the offline behaviour of groups and are often easier to access and survey than offline behaviour. As such, probing the online behaviour of group members provides a direct window into the concerns, ideology, and leadership of extremist groups. As such, the theoretical goal of this study is to demonstrate the value of SNA (a

methodology derived from structuralist ethnology) to the study of the extreme right.

In order to advance this argument, the present study explores the structure and the nature of the Canadian chapters of Soldiers of Odin on Facebook, and the significance of their links to the Finnish leadership, treating the group as a social movement based on common interests and mutual legitimation.[6] Methodologically, it is similar to Burris, Smith, and Strahm's Social Network Analysis of the organizational structure of white supremacist groups in the USA through their web sites' related links.[7] A similar methodology is used in this study to analyze the networked Facebook accounts belonging to members of the Soldiers of Odin in Canada and Finland and to build a model "treating these links as ties of affinity, paths of communication, tokens of mutual aid in achieving public recognition, and/or potential avenues of coordination."[8]

Founded in Finland in late 2015 and having spread to Canada in early 2016, the Soldiers of Odin is one of the first extreme right groups to organize almost entirely on the basis of a transnational connection made possible through online communication. As such, understanding the group's online organization provides a direct window into its purpose, ideology, and structure. Pertaining to this case, it is argued that conducting a social network analysis of the activity on Facebook of the Canadian chapters of the Soldiers of Odin provides significant insights into their operational structure and subsequent divisions within the movement and, in turn, informs the understanding of the group's self-perception, including key rhetorical and ideological principles.

Being one of the first transnational extreme right groups to organise almost exclusively online, the Soldiers of Odin presents an ideal case to demonstrate the value of social network analysis in studying the extreme right online. First, the spread of the Soldiers of Odin to Canada, perhaps more perceptibly than other cases, allows for the probing of the complexities of the relationship between online and offline communication and action. Second, while the Soldiers of Odin rely on online communication more than other groups, this case addresses – albeit only summarily – the relationship between local and global factors in fostering hate. Therefore, at a moment when similar extreme right movements appear in multiple Western states, operating in similar ways and with similar ideological goals, the case of the Soldiers of Odin is well suited to demonstrate the use of social network analysis to probe two key questions in the spread of extremist hate. Finally, while the Canadian Soldiers of Odin have not explicitly been linked to acts of terrorism, they participate in fostering a climate of hate which can lead to xenophobic violence, with police-reported hate crimes in Canada rising in 2016 for the third year in a row, and becoming much more violent.[9] Members of the Québec chapter of Soldiers of Odin also participated in the infamous 2017 Unite The Right rally in Charlottesville, where one counter-protester was killed and 38 others injured in violent clashes.[10] Therefore, there is a pressing need to address the online spread of extreme rhetoric and discourse in order to understand the diffusion of extremist ideology and violence.

In sum, this study is exploratory; it is a preliminary effort to research the online and transnational network of the Soldiers of Odin. The first step is to investigate the existence of transnational ties in order to verify that a networked structure of Soldiers of Odin groups is present on Facebook. After demonstrating the presence of such a structured network, the next step is to examine the types of relationships that exist between the Canadian and Finnish chapters on Facebook. The second section analyzes the structure of the Canadian chapters of the Soldiers of Odin, demonstrating the presence of strong connections between the Finnish and Canadian chapters, and leading to the suggestion of the presence of shared commitments and a shared preference for vigilante tactics. The conclusion addresses the end point of the study—namely, the April 2017 split of the Canadian Soldiers of Odin from the Finnish Soldiers of Odin, the subsequent separation of the Québec Soldiers of Odin from the Canadian group, and the subsequent collapse of the Canadian group.[11] This study argues that social network analysis demonstrates the presence of pre-existing divisions between the Québec and rest of Canada groups, which made this split likely.

Social Network Analysis and Social Media

Social media has undoubtedly contributed to new and revitalised forms of civic engagement. However, despite being celebrated as a great instrument of democracy and global thinking, conveying real-time information and coordinating actions during the early days of the Arab Spring and of the Euromaidan protests in Ukraine, its development has also empowered actors with explicitly undemocratic and anti-inclusive agendas. This is evident in what Caiani and Parenti called "the dark side of the Web", referring to the emergence of dynamic extreme right activities on the Internet.[12] The extreme right's early adoption of the Internet has gained plenty of scholarly attention, with recent studies increasingly highlighting how social media is used to "spread propaganda, preach to the unconverted, and as a means of intimidating political adversaries."[13] Michael Whine was one of the earliest scholars to draw attention to the connection between the extreme right and the Internet, noting that its anonymity, lack of regulation, and accessibility to young audiences make it ideal for the diffusion of racist and xenophobic ideologies.[14]

While extremist organizations may be small in number, in the online public space the use of links between sites within a network helps to create a collective identity. This forges a stronger sense of community and purpose, which can convince even the most ardent extremist that they are not alone and that their views are not, in fact, extreme at all.[15] Similarly, Gerstenfeld et al. has found evidence that right-wing extremists use mutual links to create a collective identity and that these groups often use the same borrowed rhetoric.[16] Moreover, in their study of white supremacist sites, Bih-Ru Lea et al. find that the Internet has helped create a "virtual extremist community, a set of people, organizations, or other social entities connected by a set of socially meaningful relationships...."[17] The importance of understanding how radical right groups interact through social media is becoming more apparent as networked social movements in the digital age represent a new form of political movements, and as interactive communication facilitates more active involvement.[18]

The social networks individuals construct on Facebook reflect the breadth and diversity of users' offline networks as people establish social ties based on existing relationships such as relatives, friends, or colleagues, or based on common interests and shared tastes.[19] For example, having analysed three online datasets, two of them collected from Facebook and a third from Twitter, Dunbar and her associates found that "the online environments may be mapping quite closely onto everyday offline networks, or that individuals who inhabit online environments on a regular basis begin to include individuals that they have met online into their general personal social network, treating the different modes of communication as essentially the same."[20] Likewise, research suggests that individuals generally avoid creating online personas that are substantially different from their offline selves because they treat social media platforms as reflections and extensions of their offline selves.[21] Therefore, tracking, mapping, and analysing communities on social media can provide researchers with significant insights into a group's ideological commitments and a network's structure and relationships, which will generally tend to mirror offline relationships.[22] Thus, mapping the relationships present between members of the Soldiers of Odin using social network analysis can reveal general patterns of cooperation and contestation among transnational actors, and identify key group members both within Canada and internationally.

Social network analysis is a research approach that analyses the structures and processes of social networks and is made up of nodes (individuals, groups, organization) connected by edges (friendship, kinship, financial transactions). Initially, SNA was an analytical tool developed by structural anthropology and Lewinian sociology to describe relationships among the members of a community.[23] The idea underlying the SNA approach is that interactions and communication flows are the constitutive elements of social groups. The genesis of SNA can be found in the work of anthropologist Claude Lévi-Strauss, who found that village planning was complexly related to the family and social relationships of the communities he studied. By reconstructing the village plan of populations, it was possible to draw the complicated weaving of privileges, of traditions, of hierarchical degrees, of rights and obligations.[24] As such, rather than specific attributes of individuals such as age, gender or occupation, SNA focuses on the relationships between individuals and the significance of their interactions in order to approach elements which appear in the relationship of individuals but are not located in any specific actor.

This observational procedure was later combined with graph theory. Graph theory is a way to represent relational data by using a combination of points and lines, along with mathematical axioms and formulas, to represent individuals and their relationships.[25] These relationships are established through the use of graphical representation, where nodes represent individual units and links are called edges. This represents relationships in order to answer questions such as 'who is most connected?' or 'who is the most important member in a network?' The analysis of social networks can be applied to online networks, which are networks created on platforms such as Facebook or Twitter in which information is exchanged in real time through different types of messages, or to offline networks, which are formed by in-person relationships among individuals. Social network analysis has become increasingly important among scholars as a rich source of meaningful information otherwise unobtainable through traditional social science research methods, and has quickly been adopted in a variety of disciplines. For example, SNA is used in anthropology where tribal, urban and informal groups are mapped to facilitate the understanding of formal and informal structure;[26] used in health sciences where diseases such as the Avian flu and HIV/AIDS can be geographically mapped and better prevented through the focus on interactions between infected individuals;[27] and used in criminology where scholars employ SNA to map the structure of criminal organizations and analyse the power dynamics, distribution and criminal patterns of key players.[28]

The role of networks in political violence has become well recognized in recent years, with scholars increasingly employing SNA's unique analytical capabilities to advance the study of this subject. Krebs' use of SNA to map the network responsible for the September 11, 2001 attacks and to identify the important actors in the network quickly drew the attention of academics to the potential of SNA.[29] Soon after, Marc Sageman published *Understanding Terror Networks* where, using public sources of information on 100 individuals affiliated with al-Qaeda, he established that there were four major clusters spread across several countries.[30] Several studies similar to Krebs' work have also followed major terrorist strikes, such as the Bali bombing in 2002,[31] the bombing in Madrid in 2004,[32] and the Mumbai attack in 2008.[33] Researchers have also used SNA to draw up hypotheses about how to destabilise covert networks by identifying individuals with dynamic roles whose neutralisation would most disrupt the structure of a network,[34] or to speculate on the potential replacement of Bin Laden as leader of al-Qaeda.[35]

In addition to offline networks, researchers interested in political violence have increasingly employed SNA to analyse online networks, particularly hate-promoting communities on social networking websites such as Facebook, Twitter, and Tumblr. One of the first studies on the subject, conducted by the Anti-Defamation League, examined the use of online bulletin boards by extremists in the United States.[36] As the online sphere developed and became increasingly sophisticated, so did research on the subject. Burris et al. used hyperlink analysis to explore white supremacist websites in the United States.[37] Elsewhere, Tateo examined the online structure of the Italian radical right through network analysis.[38] Recently, the use of SNA in this relatively new field of study has flourished. Most notably, Caiani and her colleagues have contributed works comparing extreme-right online networks in the United States, Italy, Spain, Germany, France, and the United Kingdom,[39] whilst Conway et al. identified English and German language extreme right communities on three distinct social networking platforms (Twitter, Facebook and YouTube), as well as cross-platforms interactions.[40]

Methodology and Corpus of Data

As previously mentioned, the Soldiers of Odin in Canada represent a novel development in the extreme right in Canada. It is one of the first cases of a group founded around a connection to European extreme right groups, seeking to mobilize on the basis of this transnational online link. Therefore, the specificity of the Soldiers of Odin comes not from its ideology nor from the identity of its members, but from its organisational structure and its relationships. For this reason, social network analysis is particularly well suited to analyse the specificity of the Soldiers of Odin.

Social network analysis concentrates on mapping the relationships between individuals or entities and analyses the meaning of these relationships. Accordingly, by studying the relationships formed by the Canadian Soldiers

of Odin both inside the group and with European leaders of the Soldiers of Odin movement, it is possible to gain an understanding of how the Canadian group positions itself in relation to the wider Soldiers of Odin movement. Furthermore, SNA allows one to consider the Canadian Soldiers of Odin as a group which is part of a larger social movement—the Soldiers of Odin worldwide. The group possesses its own organisational structure and conducts its own operations but shares some general principles and identifying symbols such as name and logo with other elements of the social movement. The movement also shares a number of practices, most notably vigilante street patrols meant to deter and prevent crime.[41] By studying the relations between the group and the wider social movement, it is possible to clarify the significance and implications of this shared belonging to a common movement.

In order to study the social interactions between Canadian Soldiers of Odin members and members abroad through the social networking platform underlying these interactions—Facebook—this research initially used the publicly available data crawling application, Netvizz.[42] Seventy-one Facebook groups in 16 different countries with memberships ranging from a handful to nearly 5,000 people were uncovered. Among these, the unique 'Facebook ID' number of each member in the 12 Canada based Soldiers of Odin Facebook groups was captured using the web scraping Chrome browser extension DataMiner[43] with various *xpath* queries.[44] Data Miner extracts data from web pages into Excel spreadsheets or CSV files using an appropriate data extraction "recipe", which consists of pre-programmed extraction instructions that can be modified as needed depending on what data is needed from a given website.

In total, 1022 unique members were identified across the 12 groups. However, membership to a Soldiers of Odin Facebook group was not deemed sufficient for an individual to merit inclusion into the dataset, as that is not sufficient evidence of actual active membership in a Soldiers of Odin chapter. As such, the photos associated with each account were individually examined for clear indications of actual membership in the Soldiers of Odin, such as identifiable pieces of Soldiers of Odin uniform or group logos: only Facebook members who displayed clear Soldiers of Odin logos, clothing, or activity were included in the dataset. When faced with an individual whose privacy settings prevented the display of the pictures in the timeline, the search command "…/search/[Facebook ID]/photos-of" was employed. This specific command displays photos in which the individual is tagged, regardless of whether they are hidden from their timeline. Therefore, given the Soldiers of Odin's rather strict control of their image—with the leadership actively policing display of branded clothing and logos[45]—it is clear that individuals identified both as associated with Soldiers of Odin Facebook groups or known members and displaying group logos can be considered recognized members of the Soldiers of Odin.

Having identified individual accounts satisfying the criteria for inclusion in the dataset, snowball sampling was employed to identify additional individuals, as it is ideal for overcoming the problems associated with sampling concealed and hard to reach populations such as those engaging in criminal, illicit or socially stigmatized activities.[46] The entire 'friend' list of each individual identified from the 12 Canadian groups was then also scrutinized, with the profile of each friend analysed for indications of membership. Unique Facebook ID numbers, geographical location, and their relationship to other individuals meeting the inclusion criteria were then recorded in the database. While this approach originally led to duplications in cases where two linked profiles both had visible friends lists, it also overcame barriers in cases where one individual had implemented privacy settings preventing access to their friends list. In cases where two individuals had private friends lists, capturing the link was not feasible; however, the number of private friend lists encountered was relatively low and could be deemed insignificant (representing less than 1.4% of accounts surveyed). In total, 737 individuals were uncovered, among which there were 265 Canadians, 104 Finns, and 33 Swedes.[47] While this by no means represents the entirety of the worldwide membership of the Soldiers of Odin, it does provide a good estimate as to the composition of the Canadian networks of Soldiers of Odin, along with their international connections. The data collection on the Canadian Soldiers of Odin networks took place between January 22 and March 15, 2017.[48]

To create a visual image of the entire body of data being considered and its network characteristics, the open-source visualization software Gephi was employed. Gephi allows the user to interact with graph representation and manipulate structures, shapes and colours in order to apply a series of force-directed algorithms to reveal

properties which may be hidden or hard to observe. As such, visualization through Gephi allows the observation of clusters of relations and the identification of central nodes, and gives an idea of the structure of a network. The structure of the network helps determine its usefulness to the nodes within it as networks with tighter ties between the nodes may be more useful than those with loose ties. In addition, a network's usefulness to a node may depend on the node's position within the network.

The dataset was subjected to the Force Atlas 2 algorithm, which simulates gravitational attraction between connected nodes in a network. Accounts which share a high level of interconnectivity among each other are placed closed to each other, forming a cluster, while accounts and clusters that share few common connections will repel one another. Whether analysing individual or group accounts, the position of each node in the graph is a function of its links with neighbouring nodes. Force Atlas 2 is especially useful for this study because of its ability to visualize large and complex networks with a highly dense interconnectivity.[49]

To complement the analysis of the dataset and of the networks examined, content analysis of posts on Soldiers of Odin Facebook groups and pages was used to confirm, support, and extend the findings from the social network analysis. This qualitative analysis was limited by privacy settings and restrictions on Facebook. Nevertheless, in many cases, members of the regional and national leaderships identified themselves by rank either in their public profile or in postings on public groups.[50] Moreover, this examination of public Facebook content posted by group leaders and group pages provided information about activities, membership, and chapter structure.

Findings

In order to demonstrate the research objectives of this investigation, which argues that social network analysis allows for a deep understanding of online and offline relationships among extreme right groups, a series of different graphs were constructed from the dataset. These graphs show the relationships—namely Facebook friendships—between identified members of the Soldiers of Odin, classified by geographical location. The use of this graphical representation allowed for the effective overview of the structure of different networks, which was complemented by the use of network metrics. Firstly, a relationship graph of all the Canadian members of the Soldiers of Odin was generated. This graph contained 265 nodes and 4,136 edges and is referred to as CANADA in Figure 1. Secondly, a relationship graph comprising all Finnish links to the Canadian network was generated. This graph contained 369 nodes and 5,392 edges and is referred to as CANFIN in Figure 2. Lastly, a relationship graph of the Finnish and Swedish links to the Canadian network was generated. This graph contained 402 nodes and 5,510 edges and is referred to as CANFINSWE in Figure 3. This graph was used mainly to validate insights from the first two graphs.

In order to properly analyse the topology of these three networks, a series of descriptive network metrics were computed to measure the structural characteristics of the network, which included modularity, whole network density, average path length, and betweenness centrality. Modularity is indicative of the community structure of a network. It is calculated by the number of edges falling within groups, minus the expected number in an equivalent network with edges placed randomly. A positive modularity value implies the possible presence of a community structure, indicating natural divisions in the network.[51] Whole network density refers to the proportion of edges between a set of actors in the network as a whole and suggests the extent to which the actors communicate with all other actors.[52] In other words, it is defined as the total number of actual connections in the network divided by total number of possible connections, ranging from 0 to 1. This measure provides insights into how effectively information may spread among the network users, as it provides an indication of the number of connections between actors through which information may be transmitted. Average path length refers to the average number of steps in the shortest paths between all pairs of nodes. This measure represents the average number of steps it takes to get from one node in the network to any other node. In 2011, the results of the analysis of the friend networks of 750 million active users in Facebook showed that the average distance between Facebook network nodes was only 4.74 degrees.[53] Betweenness centrality is a measure representing how central an individual is positioned in a social network. This metric also indicates a node's social capital. The higher the betweenness centrality, the more the node can serve as a conduit for resources and information

to other nodes, and the greater ability the node will have to shape the flow of information.[54] The measure used here is weighted, according to the importance of the connections to a node: a node connected to other highly connected nodes will have a higher score than a node with low-value connections, reflecting the social power of a node and its ability to shape flows of information.

The three network mapping graphs have been complemented by qualitative analysis of the key imagery and messages publicly available on confirmed members' profiles as well as on public Soldiers of Odin groups. This provides further information about the key members of the Soldiers of Odin and allows for the assessment of the extent to which group hierarchy conforms to the patterns observed in the network analysis, as well as providing important contextual information.

The Canadian Network (CANADA)[55]

The modularity of the Canadian network is 0.306, providing evidence of a community-based structure. The typology of the Canadian Network shows five major clusters, each roughly separated along provincial lines. At the centre of the network are several members (or recently removed members) of the Soldiers of Odin executive, which implies that these individuals successfully play a role not only as key informants in the movements but also as information brokers, forming bridges between the other clusters in the network. Moreover, this implies that individuals across Canada tend to not only be linked to other Soldiers of Odin members within regional proximity, but are also linked to members of the national executive. Therefore, it would seem clear from this social network analysis that the Soldiers of Odin is a group which is built around a rigid national hierarchy.[56] Regional leaders provide links to other regional leaders of the group, while rank-and-file members tend to be locally based and communicate mainly with members of their own local chapters, as well as with the national leadership. This is reflected in the ranking of betweenness centrality measures: out of the 10 individuals with the highest betweenness centrality, 8 of them were members (or recently removed members) of the Soldiers of Odin executive.

One key finding made possible by Figure 1 is the presence of sharp differences between provincial chapters. As noted above, the rank-and-file members are generally connected to other members of their local chapters, but have limited connections to other provinces, except for members of the national executive. This is particularly significant in Québec, where most of the members are isolated from the rest of the network. Part of this might be due to a language barrier as the Québec Soldiers of Odin seem to operate in French, but there are also differences in operational style and rhetoric, which a quick comparison of three public Facebook groups indicates. These three groups are "Soldiers of Odin Québec Support,"[57] "Soldiers of Odin Northern Ontario Support,"[58] and "Patriots of Unity Regina Support."[59] The groups from Regina and Northern Ontario show a combination of anti-crime, xenophobic and community service postings. In the case of Regina, a particular emphasis was put on snow removal efforts where Soldiers of Odin members would shovel snow on behalf of citizens, as well as emphasis on images from patrols. In the Northern Ontario group, again, anti-immigrant posts were present alongside a focus on community action. Here, drives collecting empty beer bottles and cans for charity were particularly highlighted. The Québec group, meanwhile, is devoid of any posts about community action; rather, it is filled with reports (often from dubious sources) of crimes committed by immigrants, anti-Islamic or anti-immigrant rhetoric, and announcements about upcoming protests and marches. Therefore, the relative distance between the Québec chapters and the rest of the Canadian network may also be due to ideological differences, with the Québec wing being more militant and open about its extreme right stance.[60]

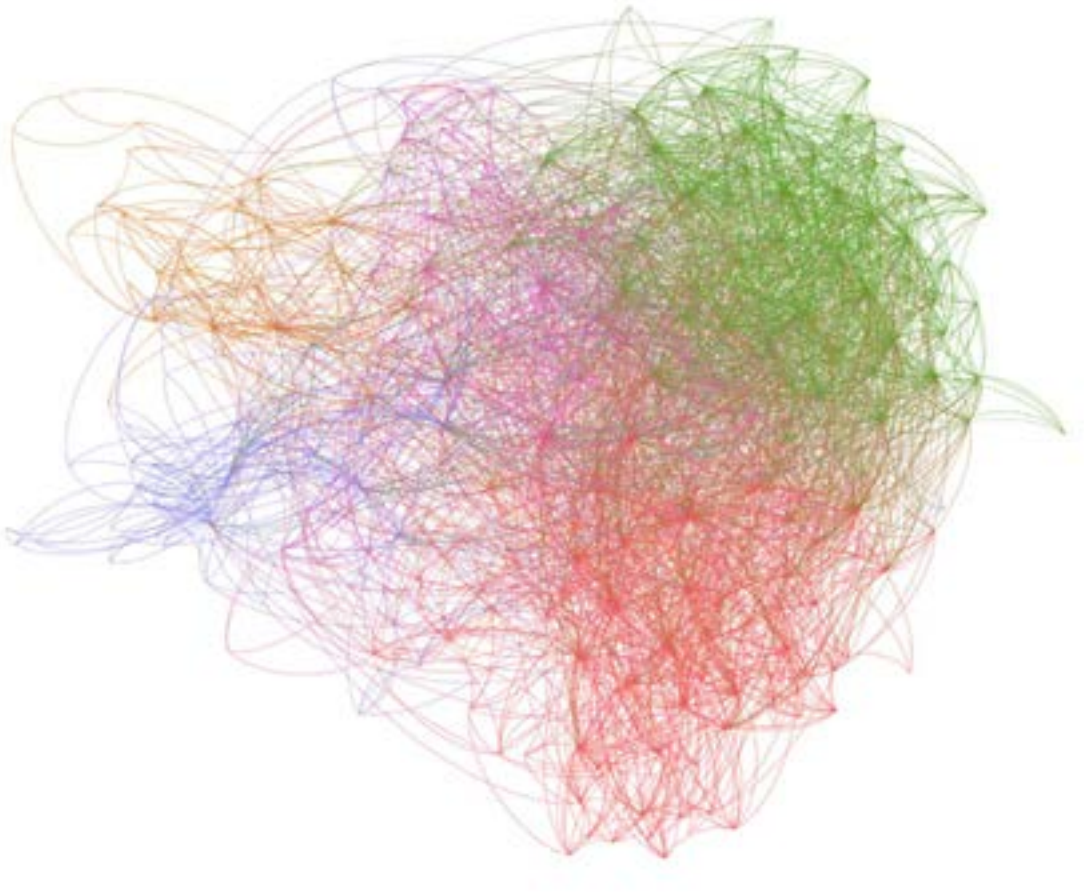

Figure 1: CANADA. Blue: Ontario; Orange: British Columbia; Green: Québec; Pink: Alberta; Red: Manitoba/ Saskatchewan.

The network also possesses a relatively high network density at 0.078 (meaning that, on average, any given Soldiers of Odin member in Canada is connected to 7,8% of the Canadian network, that is, approximately 21 members across the country), and at 2.31 the network also possesses a short average path length, especially compared to the average distance between Facebook users across the entire platform, suggesting that the network facilitates the efficient spread of information among the Canadian chapters. This indicates that, on average, there are slightly over two intermediate steps required to connect any given pair of Soldiers of Odin members in Canada.

The Canadian Network with Finnish Ties (CANFIN)

The analysis of the CANFIN network—that is, Finnish members of the Soldiers of Odin linked to Canadian members, which in large part consists of the Finnish Soldiers of Odin leadership, rather than the entirety of the Finnish membership of the group—also provides some interesting insights. As one would expect, Finnish members are clustered quite heavily. In other words, Finnish members have stronger ties to other Finnish members than to Canadian members. This is undoubtedly due to their position in the group's leadership, regional proximity to each other, their shared language and culture, and potentially also shared membership in overlapping Soldiers of Odin chapters in Finland.[61] Taken by itself, the cluster of Finnish members is more tightly intertwined than the CANADA network previously analysed. While the CANADA network had a group network density of 0.078, the Finnish cluster can boast a staggering group network density of 0.315.

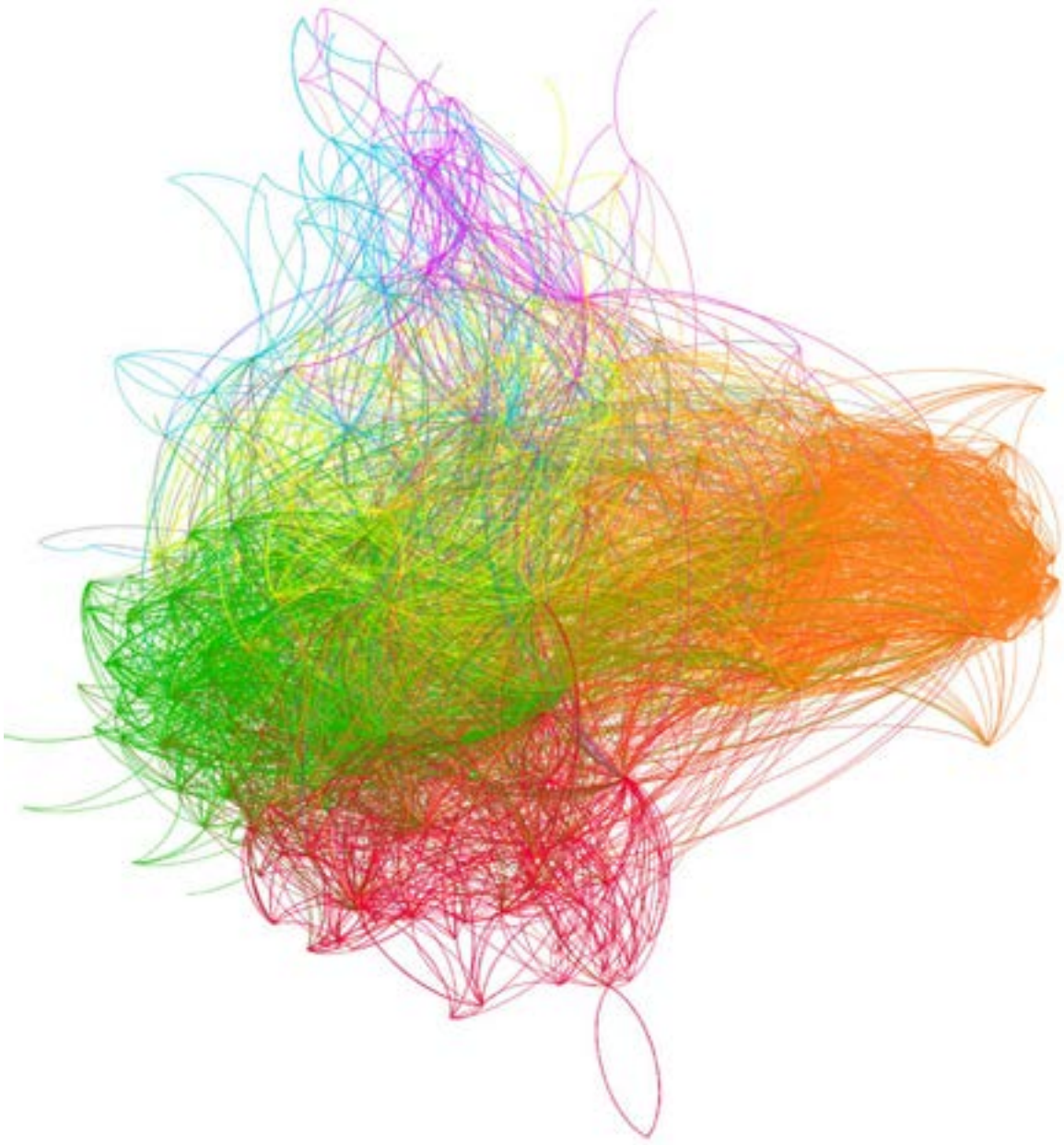

Figure 2: CANFIN. Orange: Finland; Green: British Columbia; Yellow: Alberta; Blue: Québec; Purple: Manitoba/ Saskatchewan; Red: Ontario

Taken as a whole, the CANFIN network possesses a group network density of 0.086, which is certainly due to the interconnectivity of the Finnish nodes. More interesting is that the addition of the Finnish nodes to the Canadian Network only increased the average path length from 2.31 to 2.35, meaning that information, despite the presence of additional transnational nodes, can spread across the CANFIN network nearly as efficiently as it does within the CANADA network. This means that, notwithstanding potential language barriers, content emerging from the Soldiers of Odin chapters in Finland can spread to Canadian chapters nearly as freely as content emerging from within Canada. In other words, due to their leadership function in the group, the Finnish members identified serve as principal content distributors and aggregators. Furthermore, these Finnish members are highly connected to Canadian members of all ranks, bypassing the hierarchical structure of the Canadian Soldiers of Odin. Therefore, the content emerging from Finnish members appears to be disseminated directly to Canadian members without being filtered by the national and regional leadership.

In this regard, it is worth noting the appearance of Mika Ranta—the founder and first leader of the Soldiers of Odin—as an influential node positioned near the centre of the graph in proximity to members (or recently

removed members) of the Canadian executive.[62] While there is no evidence (as the content of several Soldiers of Odin Facebook groups and members' Facebook page is private) that Ranta actually interacts with Canadian members, his position as a central node (and the high number of connections between him and Canadian members) supports the argument made above regarding the dissemination of racist propaganda within the Canadian Soldiers of Odin network. Ranta possesses in the CANFIN graph the fifth largest betweenness centrality, establishing him as one of the most significant information distributors in the network. It is also worth noting that Ranta possesses well-documented links to white supremacist and neo-Nazi groups;[63] his position as a central node allows him to participate effectively in the dissemination of such content, and implies that Canadian Soldiers of Odin members tolerate or even share his views.

This finding has a profound implication, namely that irrespective of the presence or absence of racist content on the Canadian side of the network, the presence of numerous links to Finnish Soldiers of Odin (where the presence of racism and white supremacism have been widely documented)[64] means that Canadian members of the Soldiers of Odin are exposed to such content on a routine basis. On Facebook, the content to which one is exposed is provided by one's friends. Therefore, the presence of links to Finnish Soldiers of Odin indicates at least a willingness on the part of the Canadian Soldiers of Odin to be exposed on a regular basis to racism and anti-immigrant ideology coming from the Finnish chapters. This, in turn, suggests a much more extreme right-wing side to the movement than their emphasis on community action would otherwise suggest. In other words, given the similar average path lengths, Canadian members of the Soldiers of Odin can be exposed as routinely to content from the Finnish group as they are to content from Canadian chapters. Therefore, even if the Canadian Soldiers of Odin were to refrain from racist anti-immigrant propaganda altogether,[65] it is highly likely that such content would still be disseminated from Finnish sources.

The Canadian Network with Finnish and Swedish Ties (CANFINSWE)

In addition to Finnish ties, Swedish ties to the Canadian network were also plotted. Once again, these Swedish nodes do not represent the entirety of the Swedish Soldiers of Odin membership but rather the Swedish members tied to the Canadian network, or, in other words, the Swedish Soldiers of Odin who are Facebook friends with Canadian Soldiers of Odin. The subsequent analysis provides insights consistent with the findings derived from the CANFIN network. Firstly, the Swedish clusters also boast an impressive group network density of 0.34, increasing the overall network density. The average path length remained relatively stable at 2.36, thus demonstrating the ease of access to Swedish content enjoyed by Canadian members, a finding of potentially important significance, given that Swedish Soldiers of Odin have previously been involved in violent street fighting and altercations.[66] Secondly, members of the Swedish leadership seem to play a similar role as those of the Finnish leadership, serving as central nodes acting as transnational bridges amongst Canadian and European members. For example, the most important Swedish node amongst the CANFINSWE network is Mikael Johansson, the national leader and spokesperson for the Swedish Soldiers of Odin.[67] In the CANFINSWE network, Johannson has the fourth highest betweenness centrality, while Ranta ranks third.

These high measures of betweenness centrality are particularly stunning given the disproportionate weight of Canadian members in our sample. As mentioned earlier, our full sample for the CANFINSWE graph includes 265 Canadians, 104 Finns and 33 Swedes, meaning that Canadian members outweigh Europeans by a ratio of 2:1. Yet, two of the highest-ranking nodes in the network are European leaders. Thus, despite being thousands of miles away, their influence on the network can be considered equivalent to that of local Canadian leaders. As mentioned above, the reach of European leaders bypasses the hierarchy of Canadian leaders, reaching all ranks of the movement. The high measures of betweenness centrality, as such, confirm the preponderant reach of European leaders in distributing information and propaganda within the Canadian Soldiers of Odin.

Moreover, the Swedish cluster's proximity to the Finnish cluster demonstrates a higher level of interconnectedness amongst both European groups, which was expected. However, the additional exogenous pressure of the Swedish cluster has caused several of the Canadian clusters to collapse into each other: Alberta and British

Columbia formed a single cluster, and Ontario and Saskatchewan formed another, with Québec remaining clearly distinct, once again supporting the finding about the uniqueness of the Québec chapter within the Canadian network as more militant, more open about its extreme right rhetoric, and organisationally separate.

The implications of this collapse are clear: the Québec members are very tightly networked to each other, but their links are distinctly weaker vis-à-vis the other Canadian members. Similarly, the Ontario and Prairies cluster is (geographically) distinct from the Western provinces. While this does not disprove the earlier assertion about the rigid hierarchical structure of the Canadian Soldiers of Odin, it sheds light on the wider international hierarchy of the movement, with Finnish and Swedish members of the network being more influential in structuring the network than regional and local leaders. This is particularly significant for the Québec chapter, where the links of Québec members and leaders to other Canadian regional leaders are distinctly weaker than their links to the Finnish and Swedish leadership, indicating its somewhat marginal place within the Canadian organisation, as the split of April-May 2017 demonstrates.

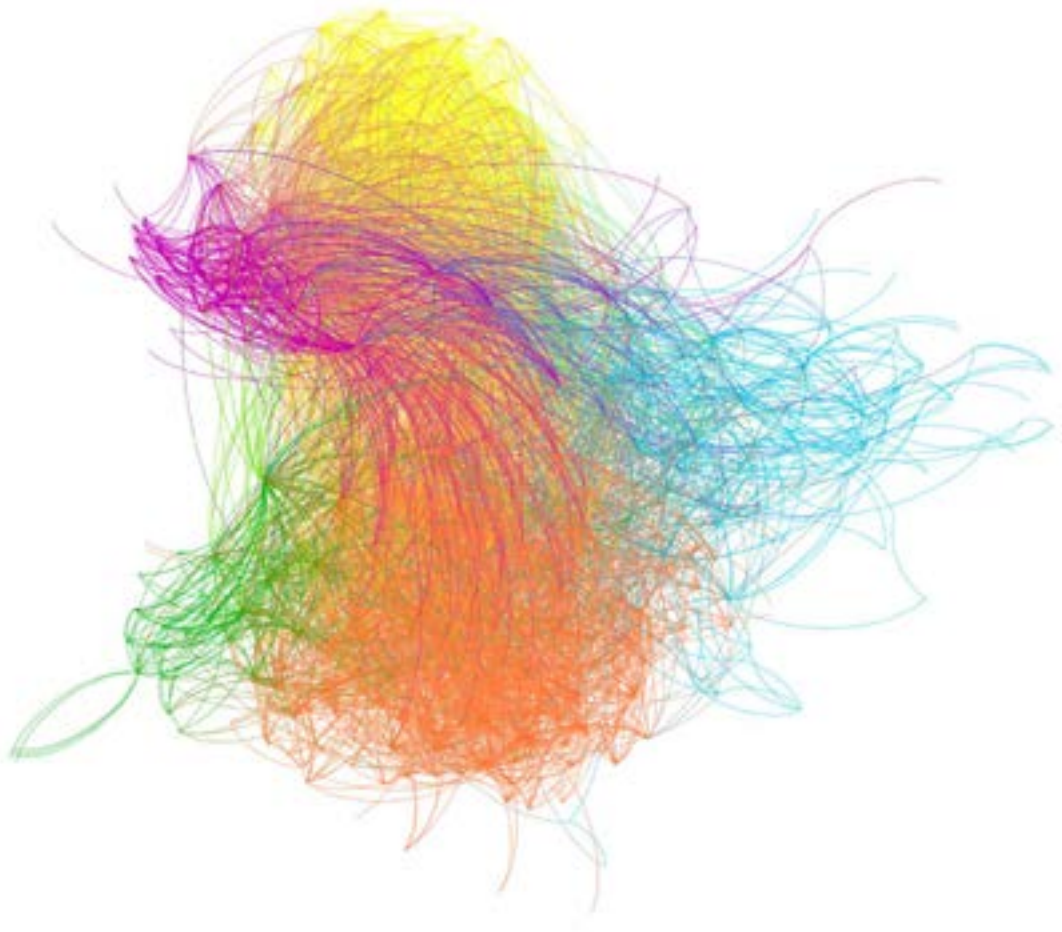

Figure 3: CANFINSWE. Yellow: Finland; Purple: Sweden; Blue: Québec; Orange: Alberta/British Columbia; Green: Ontario/Manitoba & Saskatchewan

Discussion and Conclusion

The application of Facebook-based social network analysis to the Soldiers of Odin provides multiple key insights into the group's functioning and structure, which would be hard to obtain through other methods.

As argued previously, online-based social network analysis may allow researchers a broader view than offline studies, due to the ability to gain a comprehensive overview of a group's structure and activities. This research into the Soldiers of Odin, consequently, provides significant and otherwise hard-to-access information about the group's functioning. Here follows a summary of conclusions drawn from this social network analysis.

First, on the most mundane level, this study casts significant doubts on the claim by the Canadian Soldiers of Odin to be independent of the Finnish Soldiers of Odin: "What they do over in Finland and in Europe, they have all sorts of different issues altogether. That's not really what we are. We're an independent charter of Soldiers of Odin; we're a community watch group."[68] As demonstrated above, links run far and deep, and information travels across networks easily. In fact, the average path length between two Canadian users and between a Canadian and Finnish user is virtually the same. Most importantly, however, Facebook friendship links between users are reciprocal—unlike Twitter or Instagram followers—meaning that both parties to a Facebook friendship must consent to becoming each other's 'friend'.[69] The presence of multiple recurring links between Canadian, Swedish, and Finnish Soldiers of Odin therefore indicates clearly that the Canadian Soldiers of Odin, despite their protestations, actively sought—or at least consented—to establishing close links with members of a group which regularly post xenophobic, racist, and often neo-Nazi content. As such, the presence of multiple reciprocal links between Finnish, Swedish, and Canadian members of the Soldiers of Odin indicates a mutual acceptance of the other branches' ideological commitments. The Canadian Soldiers of Odin members accepted the establishing of links with Finnish and Swedish Soldiers of Odin, and therefore it is possible to infer their acceptance of the European Soldiers of Odin's ideological commitments.[70]

As this investigation demonstrates, despite the Soldiers of Odin Canada's denials of the charges of racism and Islamophobia, their close integration with Finnish and Swedish networks suggests otherwise, as information can flow very easily between the Canadian and international networks. Furthermore, due to Facebook's way of curating and presenting content based on friendship links, connections between Canadian and Finnish members mean that Canadian Soldiers of Odin members are exposed to information and ideological rhetoric posted by Finnish members. As such, it should not be surprising to see Canadian Soldiers of Odin users borrow significant propaganda materials, rhetoric, and tropes from the Finnish and Swedish groups.[71] This is evidenced further by the Soldiers of Odin Canada's explicit embracing of the alliance with the Soldiers of Odin Finland up to April 2017. Furthermore, the findings demonstrate that while the Soldiers of Odin is relatively flexible in its ideology and oscillates between Canadian ethno-nationalism and a focus on a transnational European culture, in general they are committed to the transnational movement and to a global perception of threat, which may not be informed by their immediate experiences in Canada, but rather decisively influenced by the communications flowing from abroad. Furthermore, as has been demonstrated, the members of these online groups were keen to emphasize the significance of the connection between Finnish and Canadian groups, which bears an influence on the behaviour of the group offline. For instance, the Finnish group emphasises the use of vigilante street patrols as its main form of operation.[72] The Canadian group, by comparison, combines street patrols with community action, such as food collections for the homeless,[73] snow shovelling for the elderly,[74] and cleaning up public parks.[75] Yet, despite this somewhat different focus, street patrols remain a central focus of the Canadian Soldiers of Odin. Mack Lamoureux,[76] for instance, when infiltrating a Soldiers of Odin meeting, noted that the leadership insisted that street patrols would be conducted, despite the apparent focus on volunteerism. When the leader of the Soldiers of Odin in Québec was replaced in December 2016, signalling a return to policies closer to those of the Finnish leadership, this was done in part through a renewed focus on vigilante street patrols.[77] Finally, in their statement announcing separation from the Finnish Soldiers of Odin, the Canadian leadership explained that the Finnish leaders wanted Canadian Soldiers of Odin to shift their primary focus back to street patrols.

As this demonstrates, the presence of a strong connection between Finnish and Canadian Soldiers of Odin, which is clearly discernible on the basis of social network analysis, indubitably influenced the choice of tactics of the Canadian group. What the social network analysis therefore demonstrates, is that the Soldiers of Odin ought to be considered as one diverse yet unified transnational social movement, rather than a collection of isolated chapters. Furthermore—and this analysis highlights an essential limitation of social network analysis—

the binding power of this transnational movement is essentially its rhetoric. The connections between members identified in the network graphs represent channels of communication through which rhetorical tropes, messages, and information are exchanged. There is therefore an increased need, when approaching extremist groups (such as the Soldiers of Odin) to not only consider them as part of wider networked social movements, but also to consider the channels of rhetorical communication and ideology formation these networks entail.

Second, the CANFINSWE graph demonstrates the presence of a structural divide between Québec and the rest of the Soldiers of Odin in Canada, with the Québec network remaining distinct even though other Canadian clusters are collapsing into each other. This is of significance given the subsequent splitting of the Canadian Soldiers of Odin from the worldwide Soldiers of Odin in April 2017, while the Québec Soldiers of Odin in turn split from the Canadian group to remain affiliated to the Finnish leadership.[78] This social network analysis was conducted in the four months preceding the split and identified a clearly visible divide between the Québec and rest of Canada networks. In the CANFINSWE graph, the other provincial chapters in Canada collapsed into two networks—one for Western Canada and one for Central Canada—indicating the relatively weaker strength of hierarchical ties to regional chapter leadership, in comparison to the exogenous influence from Finland and Sweden leadership; the Québec chapter, meanwhile, remained separate from the others (and, as one can see on the graph, several Québec members are connected only to other Québec members and European leaders). This indicates some distance between Québec members and the rest of Canada, and the presence of relatively stronger regional ties within the Québec chapter. As such, this social network analysis provides a structural explanation for the later divide between Canadian Soldiers of Odin chapters and the Québec chapter, indicating that the ideological disagreement was made manifest in the group's structure. While it would likely be possible to discern such structural divides through ethnographic observation or through lengthy interviews, online social network analysis allows for the quick identification of such divisions at minimal cost.

As such, this investigation suggests that researchers ought to further explore the potential of using social network analysis to map, track, and study right-wing extremist groups, particularly where reliable information is difficult to obtain through other means. The ease of online communications and propaganda diffusion has radically transformed the constraints of time and space in organising militant groups such as right-wing extremists. Consequently, direct observation can be difficult to achieve on a large scale, when groups—such as the Soldiers of Odin—seek to organise across countries and continents. As this study demonstrates, social network analysis can yield crucial information and allows researchers to use the structures of social networks to their advantage to gain comprehensive insights into the structure of hard-to-reach groups.

This research into the Soldiers of Odin concluded in May 2017, as the Canadian group split away from the rest of the international movement.[79] Yet, the use of social network analysis to study online communications and links can be effectively transferred to other extremist, covert, terrorist, or violent groups. Right-wing groups in Canada have been increasingly collaborating in more-or-less *ad hoc* coalitions, often mobilizing online through Facebook, while American militia groups such as the Three Percenters have slowly penetrated the Canadian right-wing scene.[80] Social Network Analysis can allow researchers to make sense of the connections—or lack thereof—between various groups, and clarify communication structures and propaganda diffusion channels.

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[48] One limitation of our dataset is caused by the breakaway of the Saskatchewan chapters on February 1, 2017 in the middle of our data collection. However, it was decided not to take into account whether an individual had left the group or not at the time of the data collection. Therefore, unless a former member of the Soldiers of Odin deliberately went through their Facebook profile to delete any identifiable link to the Soldiers of Odin, they would still have been captured in our data collection. Furthermore, all of our data collection occurred prior to the Soldiers of Odin Canada's split from the Finland group (and the Soldiers of Odin Québec's split from Soldiers of Odin Canada).

[49] In Jacomy et al., the authors of the Force Atlas 2 algorithm discuss the respective advantages and drawbacks of their approach in comparison to other popular algorithms. However, as previously noted, there are a large number of other network visualization approaches available both within Gephi and in other network visualization tools, such as UCINET, ORA, NodeXl, NetworkX, and therefore there is no one 'true' representation of any network dataset. Also, see Mathieu Jacomy et al., "ForceAtlas2, a Continuous Graph Layout Algorithm for Handy Network Visualization Designed for the Gephi Software," *PLOS ONE* 9, no. 6, (2011): e98679.

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[59] "Patriots of Unity – Regina Support," *Facebook*; URL: https://www.facebook.com/groups/544191002419317/?fref=ts. This group, administered by Ryan Ward, transferred to the Patriots of Unity on February 1, 2017, when Ward and most of the Saskatchewan chapters of the Soldiers of Odin left to found the Patriots of Unity. Nevertheless, the content before February 1, 2017 can be reliably considered to be Soldiers of Odin content.

[60] It is also worth noting that since Dave Tregget's resignation/dismissal as national vice-president and Québec leader in December 2016, it would seem that no member from Québec has any official function in the national leadership.

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[62] Mika Ranta self-identifies as "National Socialist" and has a long history of belonging to the Finnish far right. See Sara Rigatelli, 'Personporträtt: Hur det kom sig att Mika Ranta grundade Soldiers of Odin', text, YLE Nyheter, 7 May 2016; URL: https://svenska.yle.fi/artikel/2016/05/07/personportratt-hur-det-kom-sig-att-mika-ranta-grundade-soldiers-odin. See also Tommi Kotonen, "The Soldiers of Odin Finland—from a local movement to an international franchise," in Tore Bjørgo and Miroslav Mares, Eds., *Vigilantism against Migrants and Minorities*, London: Routledge, 2019 [forthcoming]. Tommi Kotonen informed us that Mika Ranta announced his departure from the leadership of the Soldiers of Odin in early June 2018.

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[65] As mentioned above, a significant number of public postings in Soldiers of Odin groups and by Soldiers of Odin members contain racist, Islamophobic, and anti-immigrant messages.

[66] *The Local*, "Swedish Soldiers of Odin group involved in 'extremist' clashes"; Marina Ferhatovic, "Slagsmål på Masthuggstorget när Soldiers of Odin patrullerade," *Göteborgs-Posten*, (April 3, 2016); URL http://www.gp.se/nyheter/göteborg/slagsmål-på-masthuggstorget-när-soldiers-of-odin-patrullerade-1.182967; Ryan Ward, then head of the Regina (Saskatchewan) chapter, explicitly likened the Antifa group involved in the brawl in Jönköping in January 2017 to the Anti-Racist Collective, a group active in Canada in tracing and reporting on right-wing extremist movements. Ryan Ward, "Nationalist 'Soldiers of Odin' Clash with Militant Leftists in Sweden," *Patriots of Unity—Regina Support*, (January 11, 2017); URL: https://www.facebook.com/groups/544191002419317/?fref=ts.

[67] Mikael Johansson left the leadership of the Swedish Soldiers of Odin in June 2017, after the end of our study, following accusations of embezzlement of funds. Atilla Joldas, 'Grundaren lämnar Soldiers of Odin', *Expressen*, 3 June 2017; URL: https://www.expressen.se/nyheter/grundaren-lamnar-soldiers-of-odin-anklagas-for-brott/.

[68] François Biber, 'Soldiers of Odin Canada Says Group Not the Same as What's Going on Overseas', *CBC News*, 14 September 2016, http://www.cbc.ca/news/canada/saskatoon/soldiers-of-odin-canada-community-group-watch-1.3761178.

[69] Group memberships are generally reciprocal as well, since an administrator must accept members into the group. Page 'likes' are monodirectional, as the page owner does not vet those who like it; as such, the potential for inference from page likes is much more limited. For this reason, we did not use page likes to elaborate our model.

[70] For evidence of the Finnish Soldiers of Odin's links to xenophobic, racist, and neo-Nazi circles, see Kotonen, 'The Soldiers of Odin Finland (2019).

[71] This identification of Canadian Soldiers of Odin with their European counterparts was made clear by a leader of the Soldiers of Odin in Edmonton, Canada: "The guys in Europe, they're dealing with some real shit, we might not see that here for ten or so years. When that happens we want to look as good as possible"; Mack Lamoureux, 'Soldiers of Odin, Europe's Notorious, Anti-Immigration Group, Beginning to For Cells in Canada', *Vice Media*, 18 April 2016; URL https://www.vice.com/en_au/article/soldiers-of-odin-europes-notorious-anti-immigration-group-beginning-to-form-cells-in-canada.

[72] Kotonen, 'The Soldiers of Odin Finland'.

[73] *CBC News*, 'Yukon Soldiers of Odin Leader Claims Group Not Linked to White Supremacy', 4 January 2017, http://www.cbc.ca/news/canada/north/soldiers-of-odin-yukon-james-albert-1.3920049.

[74] *CBC News,* 'Concerns Raised after Soldiers of Odin Offer Free Snow Shovelling', 22 December 2016; URL: http://www.cbc.ca/news/canada/saskatchewan/soldiers-of-odin-shoveling-snow-1.3909599.

[75] Biber, 'Soldiers of Odin Canada Says Group Not the Same as What's Going on Overseas'.

[76] Lamoureux, 'Soldiers of Odin, Europe's Notorious Anti-Immigration Group'.

[77] Jonathan Montpetit, 'Inside Quebec's Far Right: Soldiers of Odin Leadership Shake-up Signals Return to Extremist Roots', *CBC News*, 15 December 2016; UL: http://www.cbc.ca/news/canada/montreal/quebec-far-right-soldiers-of-odin-1.3896175.

[78] While the reasons for this apparent divide cannot be assessed through social network analysis alone, possible explanations would include the presence of a linguistic divide between Francophone Québec and Anglophone Ontario and Western Canada, which would impede communications (and thus explain the presence of weaker links between Francophone and Anglophone memberships). Archambault and Veilleux-Lepage offers some further thoughts on the distinctiveness of the Québec political environment regarding the Soldiers of Odin in Emil Archambault and Yannick Veilleux-Lepage, "The Soldiers of Odin in Canada" (2019).

[79] A further survey of the later activities of Canadian Soldiers of Odin members was conducted in September 2017; see Archambault and Veilleux-Lepage, "The Soldiers of Odin in Canada" (2019).

[80] Mack Lamoureux, 'The Birth of Canada's Armed, Anti-Islamic "Patriot" Group', Vice, 14 June 2017; URL: https://www.vice.com/en_ca/article/new9wd/the-birth-of-canadas-armed-anti-islamic-patriot-group.